UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/509,326	10/06/2004	Jean-Marc Lefebvre-Despeaux	P25672	7542

7055 7590 06/13/2008

GREENBLUM & BERNSTEIN, P.L.C.
1950 ROLAND CLARKE PLACE
RESTON, VA 20191

EXAMINER	
SODERQUIST, ARLEN	
ART UNIT	PAPER NUMBER
1797	

NOTIFICATION DATE	DELIVERY MODE
06/13/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

gbpatent@gbpatent.com
pto@gbpatent.com

Office Action Summary	Application No.	Applicant(s)	
	10/509,326	LEFEBVRE-DESPEAUX ET AL.	
	Examiner	Art Unit	
	Arlen Soderquist	1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *1-25-05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

1. Claims 1-33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 1 it is not clear if the composition is being claimed at its end composition before addition of a sample, if the concentration values are with a sample present or if the composition can be representative of a composition that when mixed together from components produces the claimed concentrations. The claims will be examined from the latter point of view. Thus the claims will be considered anticipated if two solutions containing components of the composition would produce a composition having the claimed values when they are mixed together.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5 and 12 rejected under 35 U.S.C. 102(b) as being anticipated by Yurow. In the paper Yurow teaches detection of various α -substituted nitriles and gem-halonitroalkanes by chemiluminescence. The nucleophilic reaction of OOH^- with α-substituted nitriles and gem-halonitroalkanes in alkaline solution gives a hydroperoxide which oxidizes luminol to a chemiluminescent species, enabling the detection of the nitriles and halonitroalkanes. A 0.2 ml aqueous sample (1.0 mg/ml) was introduced into a 1-ml spectrofluorimetric cell. The intensity of chemiluminescent light was measured at 410 nm from the moment when 0.2 ml 0.0025M luminol in 0.20M NaOH and 0.2 ml 0.30% H_2O_2 in 0.002M Na_4L, where H_4L = EDTA, were added simultaneously. According to examiner's calculations, the combined luminol hydrogen peroxide solution would have the following composition -- 1.25 mmol/l luminol, 100 mmol/l NaOH and 44 mmol/l H_2O_2 which is anticipatory of the respective claims. Additionally the two solutions used to form the composition are anticipatory of the kit of claim 12. The relative light intensity, corrected for molecular weight differences, is listed for 17 compounds. As the number of Cl groups in the molecule increases and the number of NO_2 groups decreases, the chemiluminescence intensity decreases while its duration increases.

4. Claims 1-2, 5 and 12 rejected under 35 U.S.C. 102(b) as being anticipated by Witz (US 3,595,081). In the patent Witz teaches rapid identification of bacteria using chemiluminescence. Microorganisms containing hemoprotein substances with Fe porphyrin prosthetic groups can be specifically identified and differentiated by the characteristic time curves of chemiluminescence emission produced in the presence of luminol and H_2O_2. Thus, 0.2 ml luminol reagent containing luminol 0.33, EDTA 5.00, and NaOH 20.00 g/l. and 0.2 ml H_2O_2 reagent containing H_2O_2 0.5% and acetophenetidin 0.0002% (column 3, lines 15-33) were mixed by injection into a test tube containing 1 ml of a microbial suspension, and the light output was monitored by an RCA 1P 21 photomultiplier tube connected to a Tektronic type 541A oscilloscope. According to examiner's calculations, the combined luminol hydrogen peroxide solution would have the following composition -- 1 mmol/l luminol, 250 mmol/l NaOH and 74 mmol/l H_2O_2 which is anticipatory of the respective claims. Additionally the two solutions used to form the composition are anticipatory of the kit of claim 12. Serratia marcescens at 2.6×10^5 cells/ml produced an emission curve with a time to maximum luminescence of 8 sec and time to 50% decay of 21-4 seconds; values for Escherichia coli at 4.1×10^4 cells/ml were 5 and 13 seconds, respectively; for Bacillus cereus at $8\text{-}25 \times 10^3$ cells/ml the values were 16-24 and >30 seconds, respectively. Interference by metal ions was not a problem since most metal ions produced emission curves with maximum outputs at $\leq$ 0.2 seconds.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.

3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 3-4, 6-11 and 13-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Witz as applied to claims 1-2, 5 and 12 above, and further in view of Spiekermann (DE 19633808), Weber and Byrne (US 5,770,116). Witz teaches hemoprotein as being detected by the composition, but does not specifically teach blood and its hemoproteins.

In the published application Spiekermann teaches an enhanced sanitation control of medical and dental tools by the chemical luminescent indicator luminol. The invention concerns the enhanced sanitation control of medical and dental tools by checking for blood residues after sterilization and disinfection using the chemical luminescent indicator luminol. The reagent is prepared from four components before the test and is either sprayed onto the tool or the tool is immersed into the reagent; the luminescent spots will indicate where to proceed with cleaning. Thus the components are aqueous sodium hydroxide, a 30% hydrogen peroxide solution, luminol in an alkaline aqueous solution, and water. Sensitivity of detection can be increased and documentation can be carried out by using a photographic film. The proposed invention can reveal directly or indirectly blood-contaminated instruments or equipment, particularly invisible residual blood contamination through simple application of the composition. Particular survival areas for microorganisms and function-impairing deposits can thus be simply visualized. Page 3, lines 60-66, at least, give information on the composition.

In the paper Weber teaches application of chemiluminescence of luminol in judicial medicine and toxicology. The blood concentration can be determined photoelectrically by the luminol reaction. Intensity-time curves are set up from which the maximum luminescence intensity and the total light can be obtained as a measurement of the blood concentration. Blood in traces of dry blood and fresh blood can be detected up to a dilution of 1:107 with a modified reagent using NaOH. A luminol reagent containing Na_2CO_3 instead of NaOH gave a different intensity-time curve with dry blood than with fresh blood. CO-containing dry blood traces just as fresh blood display only low luminescence intensity.

In the patent Byrne teaches a kit comprising (i) a chemiluminescent chemical capable of emitting visible light on contact with animal blood, (ii) a peroxy oxidizing agent contained in a

disposable packet, (iii) an aqueous solvent which is free from components that would inhibit the functioning of component (i), (iv) a vessel suitable for mixing components (i), (ii) and (iii), and (v) a device for delivering the resulting mixture as a spray to an area of terrain suspected of having blood deposits thereon, whereby said spray upon contact with said blood will luminesce and emit visible light enabling recognition by the hunter of the presence of said blood and to assist in tracking and located said wounded game animal. Use of a luminol compound is preferred. In a preferred embodiment, the kit contains a spraying device containing the appropriate amount of aqueous dissolving medium. Two containers or packets may be provided in the form of, for example, foil, plastic, or paper. One container or packet will contain the sodium perborate in a dry powder form, or as, for example, a compressed tablets. The second container will contain a mixture of luminol and sodium carbonate in a dry powder form, or as, for example, a compressed tablet or tablets. The respective packets or tablets will contain a pre-measured or dosed amount of the ingredients for mixing in the pre-determined volume of aqueous solvent. Column 3, lines 6-16 teach a variety of oxidizing agents to be used.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the composition of Witz in detecting other hemoproteins such as taught by Spiekermann, Weber and Byrne in the various compositional forms/kits as taught by Spiekermann, Weber and Byrne because of the similarity in the compounds being detected, similarity of the detection reagent composition(s) and the need to and advantages of using a luminescent material such as luminol in all of the references.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The additionally cited art relates to various luminol compositions. The applied Spiekermann reference has been submitted for translation.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arlen Soderquist whose telephone number is (571)272-1265. The examiner can normally be reached on Monday-Thursday and Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Arlen Soderquist/
Primary Examiner, Art Unit 1797